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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,041	02/21/2006	Ryuji Izumoto	Q86960	9021
23373 7590 03/17/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER FISCHER, JUSTIN R	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 03/17/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/528,041

**Applicant(s)**

IZUMOTO ET AL.

**Examiner**

Justin R. Fischer

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-15 and 18-24 is/are pending in the application.  
4a) Of the above claim(s) 7-9, 13-15 and 18-24 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 10-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glinz (US 6,672,349, of record) and further in view of Rathke (US 5,826,320, of record) and Matsuo (JP 05016143, of record).

Glinz substantially teaches the runflat support member (and associated method) of the claimed invention, including a ring torus or cylindrical shell component formed of an aluminum alloy (Column 4, Lines 10-30). The reference, however, is completely silent with respect to the method in which the aluminum ring torus is formed. Rathke, on the other hand, is broadly directed to a method of forming complex metallic workpieces using electromagnetic means, wherein such a means provides rapid, easy, and consistent production of said workpieces (Column 1, Lines 5-15). One of ordinary skill in the art at the time of the invention would have found it obvious to form the ring torus of Glinz via the electromagnetic forming technique of Rathke for the reasons above. It is emphasized that Rathke is broadly directed to the manufacture of complex, metallic workpieces and thus is directly analogous to the aluminum workpiece (ring torus) of Glinz.

While Rathke fails to include exhaust holes or vent holes, such a structure is extensively used in a wide variety of molding operations in order to remove air trapped between the mold and the article being formed, as shown for example by Matsuo. In

this instance, exhaust holes are provided in a tire molding operation. One of ordinary skill in the art at the time of the invention would have found it obvious to include vent holes in the tire manufacturing methods described above absent any conclusive showing of unexpected results.

3. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morinaga (JP 2002234304, of record) and further in view of Rathke and Matsuo. Morinaga is directed to an annular reinforcement structure (cylindrical shell) that is designed to, among other things, improve tire safety at the time of puncture (can be viewed as runflat tire support). The reference further teaches that said cylindrical shell can be formed of aluminum (Paragraph 36). The reference, however, is completely silent with respect to the method in which the aluminum cylindrical shell is formed. Rathke, on the other hand, is broadly directed to a method of forming complex metallic workpieces using electromagnetic means, wherein such a means provides rapid, easy, and consistent production of said workpieces (Column 1, Lines 5-15). One of ordinary skill in the art at the time of the invention would have found it obvious to form the cylindrical shell of Morinaga via the electromagnetic forming technique of Rathke for the reasons above. It is emphasized that Rathke is broadly directed to the manufacture of complex, metallic workpieces and thus is directly analogous to the aluminum workpiece (cylindrical shell) of Morinaga.

While Rathke fails to include exhaust holes or vent holes, such a structure is extensively used in a wide variety of molding operations in order to remove air trapped between the mold and the article being formed, as shown for example by Matsuo. In

this instance, exhaust holes are provided in a tire molding operation. One of ordinary skill in the art at the time of the invention would have found it obvious to include vent holes in the tire manufacturing methods described above absent any conclusive showing of unexpected results.

As to claims 11 and 12, the cylindrical shell of Morinaga includes communicating holes 64. While the reference fails to expressly disclose the size of said holes, one of ordinary skill in the art at the time of the invention would have expected them to be relatively small as they are designed to provide communication means between adjacent chambers. One of ordinary skill in the art at the time of the invention would have found it obvious to form the holes of Morinaga in accordance to the broad range of the claimed invention (0.5-10 mm). Lastly, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed hole dimensions.

4. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dieckmann (US 6,619,350, of record) and further in view of Glinz, Rathke, and Matsuo.

Dieckmann discloses a runflat support member comprising a cylindrical shell component and formed of, for example, a light metal (Column 10, Lines 25-35). While the reference fails to expressly disclose the use of aluminum, such a material is well recognized as a light metal that is commonly used in the manufacture of similar runflat support members, as shown for example by Glinz (Column 4, Lines 10+).

Furthermore, as to the specific method of forming the aluminum cylindrical component, Rathke describes an electromagnetic forming technique that is used in the manufacture of complex, metallic workpieces and teaches that such a method provides fast, efficient,

and consistent workpieces (Column 1, Lines 1-20). Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to form the cylindrical shell of Dieckmann from electromagnetically formed aluminum, in view of Glinz and Rathke.

While Rathke fails to include exhaust holes or vent holes, such a structure is extensively used in a wide variety of molding operations in order to remove air trapped between the mold and the article being formed, as shown for example by Matsuo. In this instance, exhaust holes are provided in a tire molding operation. One of ordinary skill in the art at the time of the invention would have found it obvious to include vent holes in the tire manufacturing methods described above absent any conclusive showing of unexpected results.

Regarding claims 11 and 12, the cylindrical shell of Dieckmann includes a plurality of recesses or holes through which a lubricant chamber extends (Figure 1). One of ordinary skill in the art at the time of the invention would have been able to appropriately select the dimension of said holes as long as the lubricant chamber is able to extend therethrough. Lastly, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the broad range of the claimed invention.

#### ***Response to Arguments***

5. Applicant's arguments filed January 17, 2008 have been fully considered but they are not persuasive.

Applicant argues that the exhaust holes in Matsuo are completely different from the exhaust holes of the present invention. More specifically, applicant contends that the exhaust holes of Matsuo are provided to forcibly discharge air trapped in a mold by

a negative pressure pump while the exhaust holes of the present invention are provided to discharge air intervening between the aluminum tube and the forming jig. In this instance, it is not required for the reference to identify applicant's benefit or reasoning for providing exhaust holes. It is further noted that it appears that both the claimed invention and Matsuo are directed to the inclusion of exhaust holes to eliminate air trapped between an object to be molded or shaped and the mold surface or jig.

Applicant further argues that a hermetically sealed condition must be formed between the aluminum alloy and the mold in the method of Matsuo and the method of the claimed invention eliminates the need for such a sealed arrangement. The examiner respectfully disagrees with applicant's characterization with Matsuo. In particular, Matsuo does not provide a sealed arrangement between the article being molded and the mold surface or jig- the reference provides a sealed arrangement 13,14 between the mold/jig 1,2 and an adjacent platen structure 6. Thus, in modifying the references with Matsuo, a hermetically sealed condition between the aluminum body and the mold/jig, which applicant describes as requiring tremendous effort, would not be necessary.

In summary, Matsuo provides one example of a molding or shaping operation in which exhaust holes are provide to remove trapped air between an article being molded or shaped and the mold surface or jig. The fact that the method of Matsuo includes a negative pressure pump to assist in the removal of the entrapped air (through the exhaust holes) does not appear to be inconsistent with the claimed tire manufacturing

method. Lastly, it is emphasized that exhaust holes or vent holes are conventionally included in molding or shaping operations for the reasons detailed above.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on **(571) 272-1226**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer  
/Justin R Fischer/  
Primary Examiner, Art Unit 1791